

# Union Calendar No. 233

111<sup>TH</sup> CONGRESS  
2D SESSION

# H. R. 3650

**[Report No. 111-396, Part I]**

To establish a National Harmful Algal Bloom and Hypoxia Program, to develop and coordinate a comprehensive and integrated strategy to address harmful algal blooms and hypoxia, and to provide for the development and implementation of comprehensive regional action plans to reduce harmful algal blooms and hypoxia.

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## IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 25, 2009

Mr. BAIRD (for himself, Mr. EHLERS, Mr. MACK, Ms. CASTOR of Florida, Mr. DELAHUNT, and Mr. KRATOVIL) introduced the following bill; which was referred to the Committee on Science and Technology, and in addition to the Committee on Natural Resources, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

JANUARY 13, 2010

Additional sponsors: Mr. PALLONE, Ms. BORDALLO, Mr. BARROW, Mrs. CAPPS, Ms. ROS-LEHTINEN, Ms. PINGREE of Maine, Mr. FARR, Mr. BOYD, Mr. CAPUANO, Mr. HOLT, Mr. MARIO DIAZ-BALART of Florida, Ms. EDWARDS of Maryland, Ms. WOOLSEY, Mrs. BONO MACK, Mr. LEVIN, Mr. ABERCROMBIE, Mrs. CHRISTENSEN, Mr. HONDA, Mr. KENNEDY, Mr. MURPHY of New York, Mr. CAO, Mr. GRIJALVA, Mr. THOMPSON of California, Mr. MICHAUD, Mr. INSLEE, Ms. HIRONO, Mr. KIRK, Ms. WASSERMAN SCHULTZ, Mr. BUCHANAN, Mr. PUTNAM, Mr. MARKEY of Massachusetts, Mr. YOUNG of Florida, and Mr. ADLER of New Jersey

JANUARY 13, 2010

Reported from the Committee on Science and Technology with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]

JANUARY 13, 2010

Committee on Natural Resources discharged; committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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# **A BILL**

To establish a National Harmful Algal Bloom and Hypoxia Program, to develop and coordinate a comprehensive and integrated strategy to address harmful algal blooms and hypoxia, and to provide for the development and implementation of comprehensive regional action plans to reduce harmful algal blooms and hypoxia.

1 *Be it enacted by the Senate and House of Representa-*  
 2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 *This Act may be cited as the “Harmful Algal Blooms*  
 5 *and Hypoxia Research and Control Amendments Act of*  
 6 *2009”.*

7 **SEC. 2. AMENDMENT OF HARMFUL ALGAL BLOOM AND HY-**  
 8 **POXIA RESEARCH AND CONTROL ACT OF 1998.**

9 *Except as otherwise expressly provided, whenever in*  
 10 *this Act an amendment or repeal is expressed in terms of*  
 11 *an amendment to, or repeal of, a section or other provision,*  
 12 *the reference shall be considered to be made to a section or*  
 13 *other provision of the Harmful Algal Bloom and Hypoxia*  
 14 *Research and Control Act of 1998 (16 U.S.C. 1451 note).*

15 **SEC. 3. DEFINITIONS.**

16 *(a) AMENDMENT.—The Act is amended by inserting*  
 17 *after section 602 the following:*

18 **“SEC. 602A. DEFINITIONS.**

19 *“In this title:*

20 *“(1) ADMINISTRATOR.—The term ‘Adminis-*  
 21 *trator’ means the Administrator of the Environ-*  
 22 *mental Protection Agency.*

23 *“(2) PROGRAM.—The term ‘Program’ means the*  
 24 *National Harmful Algal Bloom and Hypoxia Pro-*  
 25 *gram established under section 603A.*

1           “(3) *UNDER SECRETARY*.—The term ‘Under Sec-  
 2       retary’ means the Under Secretary of Commerce for  
 3       Oceans and Atmosphere.”.

4       (b) *TABLE OF CONTENTS AMENDMENT*.—The table of  
 5       contents in section 2 of the Coast Guard Authorization Act  
 6       of 1998 is amended by adding after the item relating to  
 7       section 602 the following new item:

      “Sec. 602A. *Definitions*.”.

8       **SEC. 4. NATIONAL HARMFUL ALGAL BLOOM AND HYPOXIA**  
 9               **PROGRAM.**

10       (a) *AMENDMENT*.—The Act is amended by inserting  
 11       after section 603 the following:

12       **“SEC. 603A. NATIONAL HARMFUL ALGAL BLOOM AND HY-**  
 13               **POXIA PROGRAM.**

14       “(a) *IN GENERAL*.—Except as provided in subsection  
 15       (d), the Under Secretary, through the Task Force established  
 16       under section 603(a), shall establish and maintain a Na-  
 17       tional Harmful Algal Bloom and Hypoxia Program pursu-  
 18       ant to this section.

19       “(b) *DUTIES*.—The Under Secretary, through the Pro-  
 20       gram, shall utilize the resources of the Task Force to—

21               “(1) develop and promote a national strategy to  
 22       understand, detect, predict, control, mitigate, and re-  
 23       spond to marine and freshwater harmful algal bloom  
 24       and hypoxia events;

1           “(2) ensure the coordination of all Federal pro-  
2           grams that address marine and freshwater harmful  
3           algal blooms and hypoxia, and other ocean and Great  
4           Lakes science and management programs and centers  
5           that address the chemical, biological, and physical  
6           components of marine and freshwater harmful algal  
7           blooms and hypoxia;

8           “(3) coordinate and work cooperatively with  
9           State, tribal, and local government agencies and pro-  
10          grams that address marine and freshwater harmful  
11          algal blooms and hypoxia;

12          “(4) identify additional research, development,  
13          and demonstration needs and priorities relating to  
14          monitoring, prediction, prevention, control, mitiga-  
15          tion, and response to marine and freshwater harmful  
16          algal blooms and hypoxia;

17          “(5) encourage international information shar-  
18          ing and research efforts on marine and freshwater  
19          harmful algal blooms and hypoxia, and encourage  
20          international mitigation, control, and response activi-  
21          ties;

22          “(6) ensure the development and implementation  
23          of methods and technologies to protect the ecosystems  
24          affected by marine and freshwater harmful algal  
25          blooms;

1           “(7) coordinate an education program that inte-  
2           grates and augments existing programs to improve  
3           public understanding and awareness of the causes,  
4           impacts, and mitigation efforts for marine and fresh-  
5           water harmful algal blooms and hypoxia;

6           “(8) assist in regional, State, tribal, and local ef-  
7           forts to develop and implement appropriate marine  
8           and freshwater harmful algal bloom and hypoxia re-  
9           sponse plans, strategies, and tools;

10          “(9) provide resources for and assist in the  
11          training of State, tribal, and local water and coastal  
12          resource managers in the methods and technologies for  
13          monitoring, controlling, mitigating, and responding  
14          to the effects of marine and freshwater harmful algal  
15          blooms and hypoxia events;

16          “(10) oversee the development, implementation,  
17          review, and periodic updating of the Regional Re-  
18          search and Action Plans under section 603B; and

19          “(11) administer peer-reviewed, merit-based com-  
20          petitive grant funding to support—

21                 “(A) the projects maintained and estab-  
22                 lished by the Program; and

23                 “(B) the research and management needs  
24                 and priorities identified in the Regional Re-  
25                 search and Action Plans.

1       “(c) *COOPERATIVE EFFORTS.*—*The Under Secretary*  
 2       *shall work cooperatively and avoid duplication of efforts*  
 3       *with other offices, centers, and programs within the Na-*  
 4       *tional Oceanic and Atmospheric Administration and other*  
 5       *agencies represented on the Task Force established under*  
 6       *section 603(a), States, tribes, and nongovernmental organi-*  
 7       *zations concerned with marine and freshwater aquatic*  
 8       *issues related to harmful algal blooms and hypoxia.*

9       “(d) *FRESHWATER PROGRAM.*—*With respect to the*  
 10       *freshwater aspects of the Program, the Under Secretary and*  
 11       *the Administrator shall jointly carry out the duties other-*  
 12       *wise assigned to the Under Secretary under this section and*  
 13       *section 603B, including each of the programs identified in*  
 14       *subsection (e)(1) and (2). The Administrator’s participa-*  
 15       *tion under this subsection shall include—*

16               “(1) *research on the ecology of freshwater harm-*  
 17       *ful algal blooms;*

18               “(2) *monitoring and event response of freshwater*  
 19       *harmful algal blooms in lakes, rivers, estuaries (in-*  
 20       *cluding their tributaries), and reservoirs; and*

21               “(3) *mitigation and control of freshwater harm-*  
 22       *ful algal blooms.*

23       “(e) *NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-*  
 24       *TRATION PROGRAMS.*—

1           “(1) *EXISTING PROGRAMS.*—*The Under Sec-*  
2           *retary shall maintain and enhance the following ex-*  
3           *isting competitive programs:*

4                   “(A) *The Ecology and Oceanography of*  
5                   *Harmful Algal Blooms Program.*

6                   “(B) *The Monitoring and Event Response*  
7                   *for Harmful Algal Blooms Program.*

8                   “(C) *The Northern Gulf of Mexico Eco-*  
9                   *systems and Hypoxia Assessment Program.*

10                  “(D) *The Coastal Hypoxia Research Pro-*  
11                  *gram.*

12                  “(E) *The Prevention, Control, and Mitiga-*  
13                  *tion of Harmful Algal Blooms Program.*

14           “(2) *NEW PROGRAMS.*—*The Under Secretary*  
15           *shall establish the following new programs:*

16                   “(A) *An Event Response Program to coordi-*  
17                   *nate and enhance, at the request of the States,*  
18                   *marine and freshwater harmful algal blooms and*  
19                   *hypoxia events response activities.*

20                   “(B) *An Infrastructure Program to—*

21                           “(i) *increase availability of—*

22                                   “(I) *analytical facilities and tech-*  
23                                   *nologies;*

24                                   “(II) *operational forecasts; and*



1                   “(III) reference and research ma-  
2                   terials;

3                   “(ii) improve integration of harmful  
4                   algal bloom activities with existing moni-  
5                   toring and observational programs; and

6                   “(iii) enhance communication and co-  
7                   ordination required to meet the purposes of  
8                   this Act.

9                   “(f) ACTION STRATEGY.—

10                   “(1) IN GENERAL.—Not later than 12 months  
11                   after the date of enactment of the Harmful Algal  
12                   Blooms and Hypoxia Research and Control Amend-  
13                   ments Act of 2009, the Under Secretary, through the  
14                   Task Force established under section 603(a), shall  
15                   transmit to the Congress an action strategy that iden-  
16                   tifies—

17                   “(A) the specific activities to be carried out  
18                   by the Program and the timeline for carrying  
19                   out such activities; and

20                   “(B) the roles and responsibilities of each  
21                   Federal agency in the Task Force established  
22                   under section 603(a) in carrying out Program  
23                   activities.

1           “(2) *FEDERAL REGISTER*.—*The Under Secretary*  
 2           *shall publish the action strategy in the Federal Reg-*  
 3           *ister.*

4           “(3) *PERIODIC REVISION*.—*The Under Secretary*  
 5           *shall periodically review and revise the action strat-*  
 6           *egy prepared under this subsection as necessary.*

7           “(g) *REPORT*.—*Every 2 years after the submission of*  
 8           *the action strategy, the Under Secretary shall prepare and*  
 9           *transmit to the Congress a report that describes—*

10           “(1) *the activities carried out under the Program*  
 11           *and the budget related to these activities;*

12           “(2) *the progress made on implementing the ac-*  
 13           *tion strategy; and*

14           “(3) *the need to revise or terminate activities or*  
 15           *projects under the Program.”.*

16           “(b) *TABLE OF CONTENTS AMENDMENT*.—*The table of*  
 17           *contents in section 2 of the Coast Guard Authorization Act*  
 18           *of 1998 is amended by adding after the item relating to*  
 19           *section 603 the following new item:*

          “Sec. 603A. *National Harmful Algal Bloom and Hypoxia Program.*”.

20   **SEC. 5. REGIONAL RESEARCH AND ACTION PLANS.**

21           “(a) *AMENDMENT*.—*The Act is amended by inserting*  
 22           *after section 603A the following:*

23   **“SEC. 603B. REGIONAL RESEARCH AND ACTION PLANS.**

24           “(a) *IN GENERAL*.—*The Under Secretary, through the*  
 25           *Task Force established under section 603(a), shall—*

1           “(1) identify the appropriate regions and sub-  
2           regions to be addressed by each Regional Research  
3           and Action Plan; and

4           “(2) oversee the development and implementation  
5           of the Regional Research and Action Plans.

6           “(b) CONTENTS.—The Plans developed under this sec-  
7           tion shall identify—

8           “(1) regional priorities for ecological, economic,  
9           and social research on issues related to the impacts of  
10          harmful algal blooms and hypoxia;

11          “(2) research, development, and demonstration  
12          activities needed to develop and advance technologies  
13          and techniques for minimizing the occurrence of  
14          harmful algal blooms and hypoxia and improving ca-  
15          pabilities to prevent, predict, monitor, control, and  
16          mitigate harmful algal blooms and hypoxia;

17          “(3) ways to reduce the duration and intensity  
18          of harmful algal blooms and hypoxia, including in  
19          times of emergency;

20          “(4) research and methods to address human  
21          health dimensions of harmful algal blooms and hy-  
22          poxia;

23          “(5) mechanisms, including the potential costs  
24          and benefits of those mechanisms, to protect vulner-

1     *able ecosystems that could be or have been affected by*  
2     *harmful algal blooms and hypoxia events;*

3             *“(6) mechanisms by which data, information,*  
4     *and products are transferred between the Program*  
5     *and State, tribal, and local governments and relevant*  
6     *research entities;*

7             *“(7) communication, outreach, and information*  
8     *dissemination methods that State, tribal, and local*  
9     *governments and stakeholder organizations can un-*  
10    *dertake to educate and inform the public concerning*  
11    *harmful algal blooms and hypoxia; and*

12            *“(8) the roles that Federal agencies can play to*  
13    *assist in the implementation of the Plan.*

14            *“(c) BUILDING ON AVAILABLE STUDIES AND INFORMA-*  
15    *TION.—In developing the Plans under this section, the*  
16    *Under Secretary shall—*

17            *“(1) utilize and build on existing research, as-*  
18    *sessments, and reports, including those carried out*  
19    *pursuant to existing law and other relevant sources;*  
20    *and*

21            *“(2) consider the impacts, research, and existing*  
22    *program activities of all United States coastlines and*  
23    *fresh and inland waters, including the Great Lakes,*  
24    *the Chesapeake Bay, and estuaries and tributaries.*

1       “(d) *DEVELOPMENT OF PLANS.*—*The Under Secretary*  
2   *shall develop Plans under this section with assistance from*  
3   *the individuals and entities described in subsection (g).*

4       “(e) *PLAN TIMELINE AND UPDATES.*—*The Under Sec-*  
5   *retary, through the Task Force established under section*  
6   *603(a), shall ensure that the Plans developed under this sec-*  
7   *tion are completed not later than 24 months after the date*  
8   *of enactment of the Harmful Algal Blooms and Hypoxia*  
9   *Research and Control Amendments Act of 2009, and up-*  
10   *dated once every 5 years thereafter.*

11       “(f) *REPORTS.*—*Not later than 6 months after the*  
12   *completion of each Regional Research and Action Plan, the*  
13   *Under Secretary shall transmit to the Congress a report*  
14   *that provides a summary of such Plan, and once every 30*  
15   *months after the completion of such Plan, the Under Sec-*  
16   *retary shall transmit to the Congress a report that de-*  
17   *scribes—*

18               “(1) *the activities taken to implement the Plan,*  
19       *including a description of research funded and ac-*  
20       *tions and outcomes of Plan response strategies carried*  
21       *out; and*

22               “(2) *Federal funding provided to implement the*  
23       *Plan.*

1       “(g) *COORDINATION AND CONSULTATION.—In devel-*  
2 *oping the Plans under this section, as appropriate, the*  
3 *Under Secretary—*

4               “(1) *shall coordinate with State coastal manage-*  
5 *ment and planning officials;*

6               “(2) *shall coordinate with tribal resource man-*  
7 *agement officials;*

8               “(3) *shall coordinate with water management*  
9 *and watershed officials from both coastal States and*  
10 *noncoastal States with water sources that drain into*  
11 *water bodies affected by harmful algal blooms and hy-*  
12 *poxia; and*

13              “(4) *shall consult with—*

14                   “(A) *public health officials;*

15                   “(B) *emergency management officials;*

16                   “(C) *science and technology development in-*  
17 *stitutions;*

18                   “(D) *economists;*

19                   “(E) *industries and businesses affected by*  
20 *marine and freshwater harmful algal blooms and*  
21 *hypoxia;*

22                   “(F) *scientists, with expertise concerning*  
23 *harmful algal blooms or hypoxia, from academic*  
24 *or research institutions; and*

25                   “(G) *other stakeholders.”.*

1       (b) *TABLE OF CONTENTS AMENDMENT.*—The table of  
 2   contents in section 2 of the Coast Guard Authorization Act  
 3   of 1998 is amended by adding after the item relating to  
 4   section 603A, as added by section 4(b) of this Act, the fol-  
 5   lowing new item:

“Sec. 603B. Regional research and action plans.”.

6   **SEC. 6. NORTHERN GULF OF MEXICO HYPOXIA.**

7       Section 604 is amended to read as follows:

8   **“SEC. 604. NORTHERN GULF OF MEXICO HYPOXIA.**

9       “(a) *TASK FORCE INITIAL PROGRESS REPORTS.*—Not  
 10   later than 12 months after the date of enactment of the  
 11   Harmful Algal Blooms and Hypoxia Research and Control  
 12   Amendments Act of 2009, the Administrator, through the  
 13   Mississippi River/Gulf of Mexico Watershed Nutrient Task  
 14   Force, shall complete and transmit to the Congress and the  
 15   President a report on the progress made by Task Force-  
 16   directed activities toward attainment of the coastal goal of  
 17   the 2008 Gulf Hypoxia Action Plan.

18       “(b) *TASK FORCE 2-YEAR PROGRESS REPORTS.*—  
 19   After the initial report required under subsection (a), the  
 20   Administrator, through the Task Force, shall complete and  
 21   transmit to Congress and the President a report every 2  
 22   years thereafter on the progress made by Task Force-di-  
 23   rected activities toward attainment of the coastal goal of  
 24   the 2008 Gulf Hypoxia Action Plan.

1       “(c) *CONTENTS.*—*The reports required by this section*  
 2 *shall assess progress made toward nutrient load reductions,*  
 3 *the response of the hypoxic zone and water quality through-*  
 4 *out the Mississippi/Atchafalaya River Basin, and the eco-*  
 5 *nomic and social effects. The reports shall—*

6               “(1) *include an evaluation of how current poli-*  
 7 *cies and programs affect management decisions, in-*  
 8 *cluding those made by municipalities and industrial*  
 9 *and agricultural producers;*

10              “(2) *evaluate lessons learned; and*

11              “(3) *recommend appropriate actions to continue*  
 12 *to implement or, if necessary, revise the strategy set*  
 13 *forth in the 2008 Gulf Hypoxia Action Plan.”.*

14 **SEC. 7. PACIFIC NORTHWEST, ESTUARIES, AND PUGET**  
 15 **SOUND HYPOXIA.**

16       (a) *AMENDMENT.*—*The Act is amended by inserting*  
 17 *after section 604 the following:*

18 **“SEC. 604A. PACIFIC NORTHWEST, ESTUARIES, AND PUGET**  
 19 **SOUND HYPOXIA.**

20       “(a) *ASSESSMENT REPORT.*—*Not later than 12*  
 21 *months after the date of enactment of this Act, the Task*  
 22 *Force established under section 603 shall complete and sub-*  
 23 *mit to Congress and the President an integrated assessment*  
 24 *of hypoxia in the coastal and estuarine waters of the Pacific*



1 *Northwest that examines the status of current research,*  
2 *monitoring, prevention, response, and control efforts.*

3       “(b) *PLAN*.—Not later than 2 years after the date of  
4 *enactment of this Act, such Task Force shall develop and*  
5 *submit to Congress a plan, based on the integrated assess-*  
6 *ment submitted under subsection (a), for reducing, miti-*  
7 *gating, and controlling hypoxia in the coastal and estua-*  
8 *rine waters of the Pacific Northwest. In developing such*  
9 *plan, the Task Force shall consult with State, Indian tribe,*  
10 *and local governments, and academic, agricultural, indus-*  
11 *try, and environmental groups and representatives. Such*  
12 *plan shall include incentive-based partnership approaches.*  
13 *The plan shall also address the social and economic costs*  
14 *and benefits of the measures for reducing, mitigating, and*  
15 *controlling hypoxia. At least 90 days before submission of*  
16 *such plan to the Congress, a summary of the proposed plan*  
17 *shall be published in the Federal Register. After submission*  
18 *of the plan, the Task Force shall provide progress reports*  
19 *on the activities toward attainment of the goals set forth*  
20 *in the plan reduce, mitigate, and control hypoxia in the*  
21 *coastal and estuarine waters of the Pacific Northwest every*  
22 *2 years.”.*

23       (b) *TABLE OF CONTENTS AMENDMENT*.—*The table of*  
24 *contents in section 2 of the Coast Guard Authorization Act*

1 of 1998 is amended by adding after the item relating to  
 2 section 604 the following new item:

“Sec. 604A. Pacific Northwest, estuaries, and Puget Sound hypoxia.”.

3 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

4 Section 605 is amended to read as follows:

5 **“SEC. 605. AUTHORIZATION OF APPROPRIATIONS.**

6 “There are authorized to be appropriated—

7 “(1) to the Under Secretary to carry out sections  
 8 603A and 603B, \$35,000,000 for each of fiscal years  
 9 2010 through 2014, of which, for each fiscal year—

10 “(A) up to \$3,000,000 shall be for the devel-  
 11 opment of the Regional Research and Action  
 12 Plans and the reports required by sections 604  
 13 and 604A;

14 “(B) \$3,000,000 shall be for the research  
 15 and assessment activities related to marine and  
 16 freshwater harmful algal blooms at research lab-  
 17 oratories of the National Oceanic and Atmos-  
 18 pheric Administration;

19 “(C) \$8,000,000 shall be used to carry out  
 20 the Ecology and Oceanography of Harmful Algal  
 21 Blooms Program (ECOHAB);

22 “(D) \$5,500,000 shall be used to carry out  
 23 the Monitoring and Event Response for Harmful  
 24 Algal Blooms Program (MERHAB);

1           “(E) \$1,500,000 shall be used to carry out  
2           the Northern Gulf of Mexico Ecosystems and Hy-  
3           poxia Assessment Program (NGOMEX);

4           “(F) \$5,000,000 shall be used to carry out  
5           the Coastal Hypoxia Research Program  
6           (CHRP);

7           “(G) \$5,000,000 shall be used to carry out  
8           the Prevention, Control, and Mitigation of  
9           Harmful Algal Blooms Program (PCM);

10           “(H) \$1,000,000 shall be used to carry out  
11           the Event Response Program; and

12           “(I) \$3,000,000 shall be used to carry out  
13           the Infrastructure Program; and

14           “(2) to the Administrator to carry out sections  
15           603A and 603B, \$6,000,000 for each of fiscal years  
16           2010 through 2014, of which up to \$3,000,000 for  
17           each fiscal year shall be for participation in carrying  
18           out section 603A(e), as described in section 603A(d).”.

Union Calendar No. 233

111<sup>TH</sup> CONGRESS  
2<sup>D</sup> Session

**H. R. 3650**

[Report No. 111-396, Part I]

**A BILL**

To establish a National Harmful Algal Bloom and Hypoxia Program, to develop and coordinate a comprehensive and integrated strategy to address harmful algal blooms and hypoxia, and to provide for the development and implementation of comprehensive regional action plans to reduce harmful algal blooms and hypoxia.

JANUARY 13, 2010

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with an amendment

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